1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

343 284 ways built into the center of the platform. Formerly the bottom hatch (*pu lua*) was level with the platform and lashed to it by complicated knots supposed to be known only to the owner of the house. When in use, the fastenings were untied and the hatch placed on the ground. The top hatch (*pu tai*), about 12 inches directly over the first hatch, was lashed horizontally to the top ends of thin vertical poles, which were lashed at the bottom to the platform supports. The two hatches and the vertical supporting poles thus formed a sort of box resting on the platform. On visiting his *uale taheatahi*, the owner took with him a block of wood which he placed on the ground under the hatch. He unuosed this block to unfasten the first hatch, inside of which he usually kept a length of rope. One end of this he fastened to the platform and then, by the help of the hanging rope, scrambled up to open the second hatch. On leaving, he securely fastened the hatches, retied the knots, placed his piece of rope on the platform, and carried off his block of wood. After white contact a short ladder, something like a truncated groom's ladder, came into general use to reach the platform hatches. This was called *tuke*, a name probably derived from the word "stool". It was kept in the owner's sleep house when not otherwise needed. I saw no *uale taheatahi* house with two hatches in the storage platform. The above description is based on informant's account of old time practice. Many houses today, however, have the single hatch, which as often as not is fastened with hinges and padlock to the platform.

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RIDGEPOLE, WALL PLATE HOUSE

341 344 336 The type *uale atua* house is a bilateral wall plate house with two or more ridgeposts supporting the ridgepole (fig. 11). The type house was used in former days principally as a god house (*uale atua*), but the massive construction style made the same type of house ideal for a meeting or watch house. Smaller houses of this type were occasionally used as sleep houses. There are available for study today the watch house at Matala, erected 75 years ago (described as type), a sleep house on the outer beach of Uta, and a model *uale atua* house (C8086)[1]. Brief mention of certain features of the framework of the watch house has already been made by Macgregor (1930:43).

The watch house was originally constructed with six wall posts. A seventh post has been added at a later date to give added strength. The wall posts of *pauma* wood are sunk about an arm's length in the ground. Each post is round in cross section, save at the top where it is adzed roughly rectangular. The top of each post is grooved to receive the wall plates of pandanus wood, which are laid in the grooves, unlashed (fig. 11). Five tiebeams are placed transversely across the wall plates, one tiebeam at each end, and the other three equi-spaced along the length of the house. The end of each tiebeam is grooved to fit securely over the wall plate to which it is lashed. The ends of the tiebeams are flush with the wall plates. Two ridgeposts of *pauma* wood, buried in the ground at one end and grooved at the other end, support the main ridgepole of pandanus wood which rests in the grooves and is unlashed. Each ridgepost rises from the ground on the inner side of the second tiebeam from each end; about 2 inches separate ridgepost and tiebeam. Running between wall plate and ridgepole on either side of the house are six principal rafters of pandanus wood. Each rafter is round in cross section but is grooved at each end to fit against ridgepole and wall plate, to which it is lashed. Each rafter at its lower end projects about 9 inches beyond the wall plate. The under surface at the end of the rafter is flattened that the square surface of the eave purlin may fit more closely to it before lashing (fig. 11, *c*).

[1] Unless otherwise stated, all collection numbers refer to specimens in Bernice P. Bishop Museum.

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

341 344 395 284 On each side of the house 25 thatch rafters (*kaye*) of *puapua* wood are lashed to the eave and midway purlins. At the top, each pair of thatch rafters crosses above the ridgepole to support a thatch ridgepole to which each rafter is lashed. At the bottom, the thatch rafters are lashed to a thatch purlin which passes longitudinally on top of the series of rafters.

Each gable end is formed first by three principal end rafters of *tamanave* wood which are lashed to the end tiebeam. The two outermost end rafters run between the end tiebeam and the two outermost side rafters, being lashed to these about two-thirds of the distance from the lower ends of the side rafters. The middle end rafter runs from the end tiebeam to the main ridgepole and is lashed to it at a point 3 feet from the end of the ridgepole and on the inside of the first two principal end rafters. To the bottom ends of these end rafters is lashed an end eaves purlin. The nine end thatch rafters are lashed at the lower end to an end eaves purlin, and at their upper end to the second side thatch rafters. Thus the gable ends of the house incline obliquely inward so that the main roof projects beyond the gable end for a distance of about 2½ feet.

The lashings of this house are of two kinds. The lashing of thatch rafters to eave and midway purlins and to thatch ridgepole, and of the end thatch rafters to the side thatch rafters is by a continuous cord of three-ply braided sennit, ⅜ inch thick, which takes two transverse turns around the two crossing elements, then makes a single circumferential turn around the transverse turns between the two elements, and passes to the next crossing elements. All other lashing is the typical Pukapukan alternating curves pattern lashing with three-ply braided sennit, ⅜ to ½ inch thick.

The thatching of this house is with coconut roof sheets, the method being that described for the *wale wahayamea* house.

The floor is covered with coral gravel which is retained by lengths of timber laid on the ground on the inside of the wall posts.

Principal measurements of this *wale atua* type watch house are: length, 34 feet; width, 14 feet; height of wall posts from the ground, 4 feet 10 inches; height of eaves from the ground, 3 feet 10 inches; height of ridgepost, 10 feet 2 inches; diameter of ridgepost, 5 to 6 inches; diameter of wall posts, 9 inches; diameter of tiebeams, 6 inches; diameter of principal rafters, 4 inches.

Variations

341 336 342 The construction of the sleep house on the outer beach of Uta and that of the model house in Bishop Museum are identical with the basic structure of the watch house first described, except for the following variations:

Sleep house. This house has four ridgeposts, grooved to hold the ridgepole. There are four wall posts on either side of the house, grooved to receive the wall plate. Four tiebeams are placed on these wall plates, their ends flush with the wall plates. Rafters cross above ridgepole to take thatch ridgepole, and are flush at their lower ends with the wall plates. There are no purlins or thatch rafters, roof sheets of coconut being fastened directly to the rafters. Along the windward side and west end of the house, there are subsidiary wall posts, each 2 feet apart, which are lashed at their upper end to the wall plate or end plate. The thatching from the roof or end is continued to the ground on these sides, the coconut roof sheets being applied directly to the subsidiary wall posts to form a permanent wall. At the east end of the house, the end rafters run out at an angle of 60 degrees from the side rafters, and are supported at their lower end by six low end posts, each 20 inches high, and an end wall plate. The east end thatching continues to the ground, and the end thatching is tied directly to the end wall posts. The whole of the south (leeward) side of the house is permanently open. This house is 24 feet long and 10 feet wide; the ridgepost is 6 feet high, and the eaves on the south side are 3 feet from the ground. The house is low, strong, and compact, well